## Recreational Use Attainability Analysis

## **Cover Sheet**

Water Body Name: HICKORY CREEK
Water Body Identification #:0588
Completed UAA Checklist:
G Pre-Field Preparatory Data Sheet
G Maps with actual survey sites marked
G Data Sheet A
G Data Sheet B – 3 of 3 pages for each site
O Number of Sites: 3
G Data Sheet C (if applicable)
o Number of Interviews:
% Photographs
o Quantities
Upstream
Downstream 3 Other (A K 1)
Upstream $3$ Downstream $3$ Other $4$ $10$
lol. I
I, the undersigned, hereby affirm to the best of my knowledge, that all information reported in this UA
is true and accurate.
Signed: ACHALLANDO Date: 10/16/06  Printed Name: Carolina Gallando Telephone #: 410-356-8993  Organization: Tetra Tech, Inc. Position: SULMIST
Printed Name: Carolina Gallardo Telephone #: 410-356-8993
Organization: Tetra Tech, Inc. Position: SULMIST
Total real, me. 1 Ushion. 2010/11/1/

#### <u>Pre-Field Preparatory Data Sheet</u> <u>for Recreational Use Stream Surveys</u>

Water Body Name: HICKORY CRE (from USGS 7.5' quad)	EK				
8-digit HUC: N/A	Missouri Water Body Identification (WBID) #: 0588				
County: GRUNDY					
Upstream Legal Description: MOUTH					
Downstream Legal Description: 09, 60N, 25W					
Discharger Facility Name(s): N/A					
Discharger Permit Number(s):					
Weather Conditions for Past 7 days: Warm, dry, 5vnny					

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest.

WBID # 598 Site # N/A

Date: 10 / 91 / 2006

#### Field Data Sheets for Recreational Use Stream Surveys

#### Data Sheet A - Water Body Identification

Water Body Name: HICKORY CREEK

WBID #: 0588

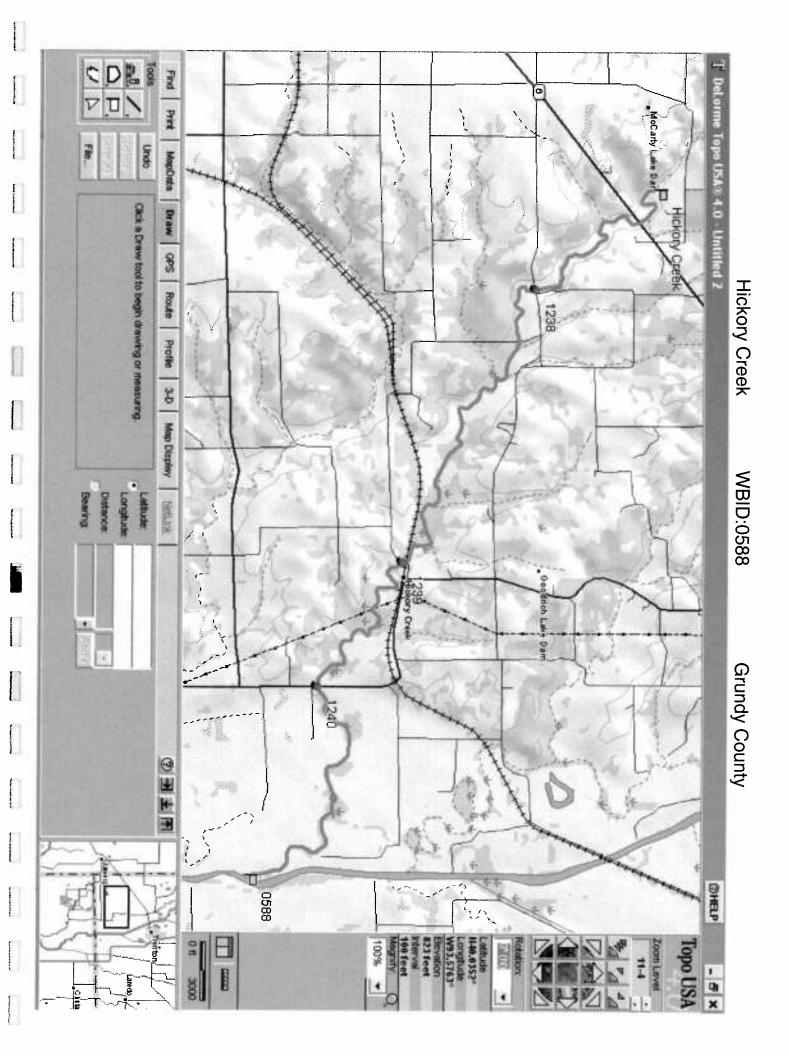
Upstream Coordinates: (WGS 84, ddd.dddd) 40.01798, 93.71723

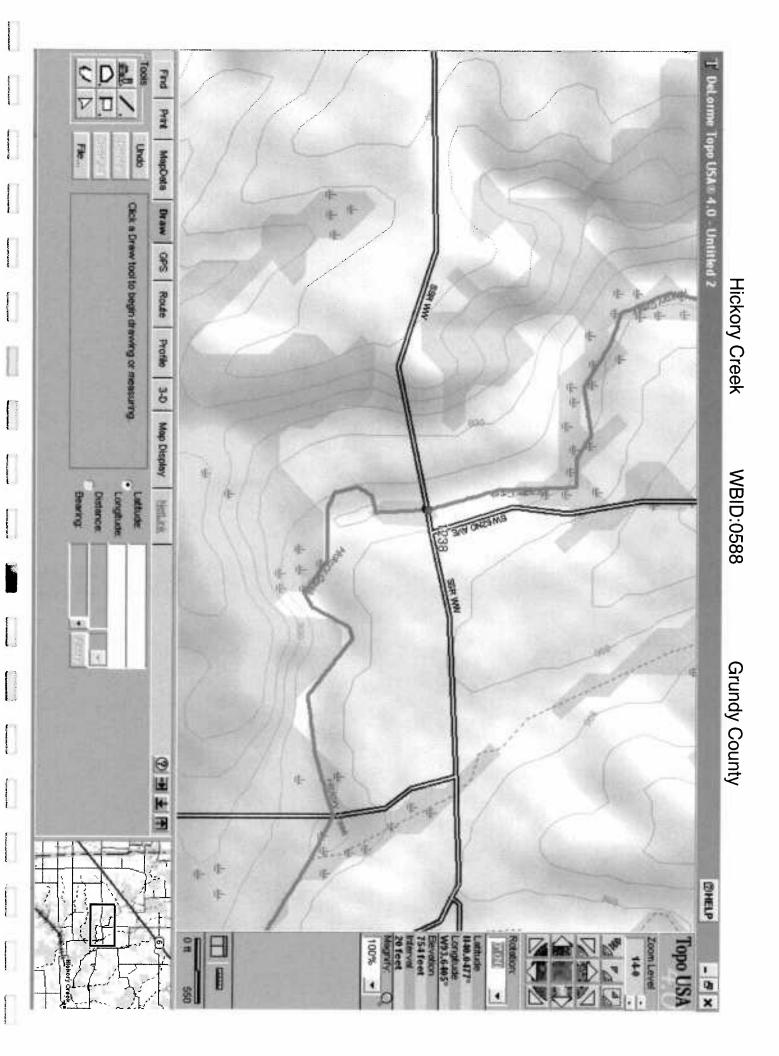
Downstream Coordinates: (WGS 84, ddd.dddd) 39.98764, 93.44611

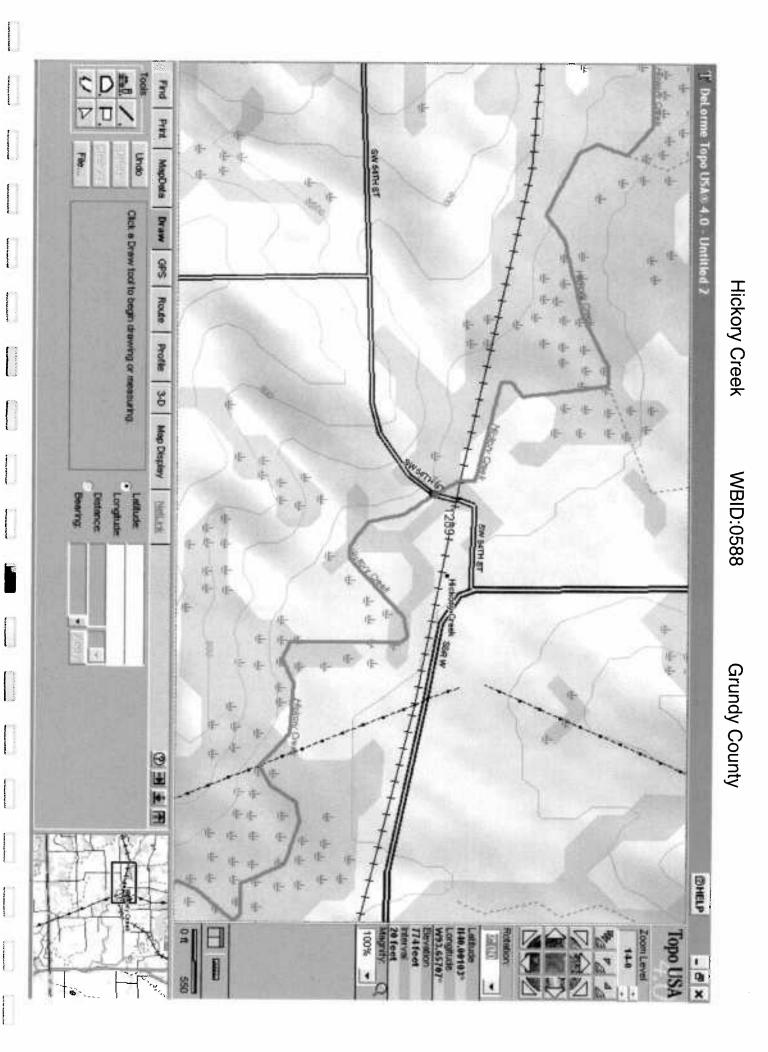
Current Weather Conditions: Waym, dry, sunny

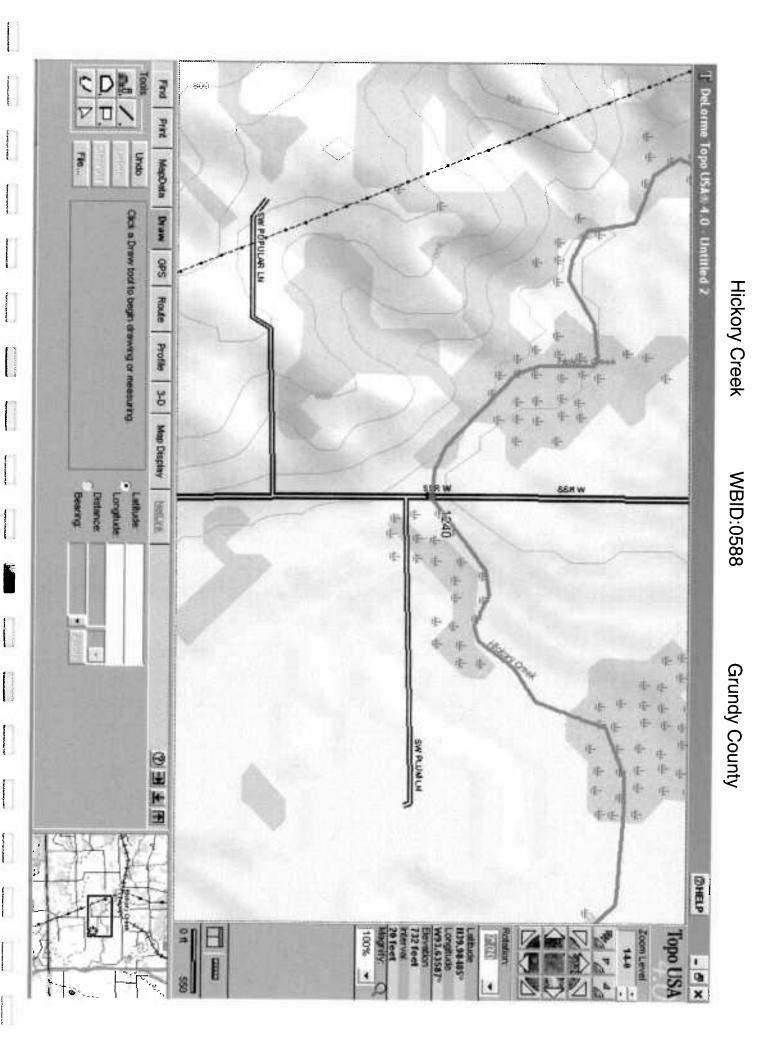
Number of Sites Evaluated: 3

Name(s) of Surveyor(s): Chad Barbour, Caroling Gallardo









Date: 10 / 09 / 2006

#### Field Data Sheets for Recreational Use Stream Surveys

#### Data Sheet B - Site Characterization - 1 of 3

(A separate Data Sheet B must be completed for each site)

			_				
Latitude (ddd.dddd): 40.01794					Arrival Time:		
Longitude (ddd.dddd):	Longitude (ddd.dddd): 93 71723			1717			
Photo Ids: Upstream:					Other:		
0965		(	0966	091	et, 0968, 09	69,0970	
					•		
Narrative Description of				rby road	ls, landmarks, etc.)		
at Hwy DE	TCG WW br	idg	e chossing				
Surrounding Condition tems of interest.)	as*: (Mark all that p	romo	te or impede recreational u	ses. Atta	ach photos of evider	nce or unusual	
☐ City/county parks	☐ Playgrounds		IDC conservation lands	ע □ ט	rban areas	☐ Campgrounds	
☐ Boating accesses	☐ State parks		lational forests	□Na	iture trails	☐ Stairs/walkway	
☐ No trespass sign	☐ Fence	ĭXS	teep slopes	<b>X</b> (01	A Other: MWLD (awn (0969)		
Human Uses Observed	*:				Ag-Field	_ (0970)	
☐ Swimming	☐ Skin diving		☐ SCUBA diving	ПΩТ	ubing	☐ Water skiing	
☐ Wind surfing	☐ Kayaking		☐ Boating	$\square$	ading	☐ Rafting	
☐ Hunting	☐ Trapping		☐ Fishing		one of the above	☐ Other:	
Describe: (include numb	er of individuals rec	reaun	g, frequency of use, photo-	docume	ntation of evidence	of recreational uses, etc.)	
Evidence of Human Us	e*: (0°	168)				<u> </u>	
Roads	Foot paths/prii	nts	☐ Dock/platform	□ Li	vestock Watering	☐ RV / ATV Tracks	
☐ Rope swings	☐ Camping Sites		☐ Fire pit/ring		PDES Discharge	☐ Fishing Tackle	
Other: Trash	(0967)						
Sources of Pollution: (e.	g., trash dumping, t	ires, d	rainages, discharges, etc.)				
TASH-SEE PHOTO O							

WBID# 588 Site# 1238 4 Date: 10 / 09 / 2006 Data Sheet B - Site Characterization - 2 of 3 Stream Morphology: **Upstream View Physical Dimensions:** Distance from Width (m) Length (m) Avg. Depth (m) Max Depth (m) access point (m) ☐ Riffle □ Run 10 2.4 0.30 0.35 ☑ Pool 0 X No Velocity (ft/sec): ☐ Yes Flow Present? **Downstream View Physical Dimensions:** Distance from Width (m) Length (m) Avg. Depth (m) Max Depth (m) access point (m) □ Riffle □ Run 13 0.20 0.30 X Pool Velocity (ft/sec): ▼ Flow Present? ☐ Yes Substrate\*: (These values should add up to 100%.) % Cobble 20 % Gravel (00 % Sand 10 % Silt 10 % Mud/Clay % Bedrock Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site.)

4 14	uncic	regetation	• (Note amount of vegetation of algal growth at the assessment site	-)
	N	A		

Water Characteristics\*: (Mark all that apply.) Odor: ☐ Sewage Other: Avalrobic ☐ Musky ☐ Chemical None None Color: □ Clear ☐ Green ☐ Gray ∠Milky ☐ Other: **Bottom Deposit:** ☐ Sludge ☐ Solids Fine sediments □ None ☐ Other: Surface Deposit: □ Oil ☐ Scum ☐ Foam None ☐ Other:

<sup>\*</sup>This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that affect another use.

WBID #	588	Site # _	1238
Date: 10	1091	2006	

#### Data Sheet B - Site Characterization - 3 of 3

<b>Comments:</b> Please describe any departures from conditions, problems in measuring, site relocation).	<b>mments:</b> Please describe any departures from protocol and the reasons for departure (e.g., unanticipated unique local ditions, problems in measuring, site relocation).				
NONE					
	•				

Date: 10 / 09 / 2006

#### NONE

#### Field Data Sheets for Recreational Use Stream Surveys

#### Data Sheet C – Interviews

(Make additional copies as necessary for multiple interviews)

If so, how	in the area?   Valong have you  rsonally used thi	lived here?	ecreation since 1975?	□ Yes □ No		
	ase check ALL t		is contained to to.	2 103 2110		
☐ Swimming	Swimming					
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	□ Rafting		
☐ Hunting	☐ Trapping	☐ Fishing	☐ None of the above	☐ Other:		
3. Have you ob	G 1 – 5 times G Less than  served others usi	1 time per year – p	lease describe:	975? 🗆 Yes 🗆 No		
[	ase check ALL t			T		
Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing		
☐ Wind surfing	☐ Kayaking	☐ Boating	□ Wading	Rafting		
Hunting ☐ Trapping ☐ Fishing ☐ None of the above ☐ Other:  How often have you observed it being used for recreation?  G More than 5 times per year  G 1 - 5 times per year  G Less than 1 time per year - please describe:						
4. Additional C	omments:					

Address:

Telephone #:

WBID # 588 Site # 1239

Date: 10 / 09 / 2006

## Field Data Sheets for Recreational Use Stream Surveys

#### Data Sheet B - Site Characterization - 1 of 3

(F	A separate Data S	sheet B must be o	completed f	or each site)		
Latitude (ddd.dddd): 3	Latitude (ddd.dddd): 39,99939 Arrival Time:					
Longitude (ddd.dddd): O	EPE:5m		1747	_		
Photo Ids: Upstream:	D	ownstream:		Other:		
0971		0972	0973	,09740977,0978	,0979	
Narrative Description o	of Location: (Des	cribe access point to	stream, nearl	by roads, landmarks, etc.)		
at sw54th s	street brid	ge crossin	g			
Surrounding Condition tems of interest.)	s*: (Mark all that p	romote or impede re	ecreational use	es. Attach photos of evider	nce or unusual	
☐ City/county parks	☐ Playgrounds	☐ MDC conservat	tion lands	☐ Urban areas	☐ Campgrounds	
☐ Boating accesses	☐ State parks	☐ National forests	3	☐ Nature trails	☐ Stairs/walkway	
☐ No trespass sign	Fence 0973	☐ Steep slopes		MOther: WWW.	awn (0978)	
Human Uses Observed <sup>*</sup>	<b>*</b>			cow pas	ture (0971) acks (0979)	
	☐ Skin diving	□ SCUBA d	living	☐ Tubing	☐ Water skiing	
☐ Wind surfing	☐ Kayaking	☐ Boating		☐ Wading	☐ Rafting	
☐ Hunting	☐ Trapping	☐ Fishing		None of the above	☐ Other:	
Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc.)						
Ev <u>idence of Human Use</u>	2*:			·		
Roads	☐ Foot paths/prin	ts Dock/pla	atform	☐ Livestock Watering	☐ RV / ATV Tracks	
☐ Rope swings	☐ Camping Sites	☐ Fire pit/ı	ring	☐ NPDES Discharge	☐ Fishing Tackle	
Other: Trash (	0974), gi	affiti (09	177)			
Sources of Pollution: (e.s	g., trash dumping, ti	res, drainages, disch	arges, etc.)			
Trash (0974	-) . CON PASTU	NG-(0971)				

WBID # 588 Site # 1239 4 Date: 10/09/2006 Data Sheet B - Site Characterization - 2 of 3 **Stream Morphology: Upstream View Physical Dimensions:** Distance from Width (m) Length (m) Avg. Depth (m) Max Depth (m) access point (m) ☐ Riffle □ Run ☑ Pool  $\Diamond$ 2.5 0 0.15 0,20 Flow Velocity (ft/sec): Present? ☐ Yes X No **Downstream View Physical Dimensions:** Distance from Width (m) Length (m) Avg. Depth (m) Max Depth (m) access point (m) ☐ Riffle □ Run 0.85 Pool 15.8 Present? Velocity (ft/sec): 🕽 Flow ☐ Yes Substrate\*: (These values should add up to 100%.) % Cobble **₹**@ % Gravel 30 50 % Sand % Silt % Mud/Clay 10 % Bedrock CE010101/0P Aquatic Vegetation\*: (Note amount of vegetation or algal growth at the assessment site.) NA Water Characteristics\*: (Mark all that apply.) Odor: X Other: ANGENDUC ☐ Sewage ☐ Musky ☐ Chemical □ None Color: □ Clear ☐ Green DOINGE DOCK ☐ Gray ☐ Milky

*This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive
understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation
use analysis but may point to conditions that need further analysis or that affect another use

☐ Foam

Fine sediments

☐ None

□ None

☐ Other:

☐ Other:

**Bottom Deposit:** 

Surface Deposit:

☐ Sludge

□ Oil

☐ Solids

Scum

WBID # 588 Site # 1239

Date: 10 / 09 / 2006

#### Data Sheet B - Site Characterization - 3 of 3

Comments: Please describe any departures from protocol and the reasons for departure (e.g., unanticipated unique local conditions, problems in measuring, site relocation).				
5.00				

Date: 10 / 09 / 2006

# Non を **Field Data Sheets for Recreational Use Stream Surveys**

#### Data Sheet C - Interviews

<ul> <li>(Make additional copies as necessary for multiple interviews)</li> <li>1. Do you live in the area? □ Yes □ No     If so, how long have you lived here?</li></ul>						
2. Have you personally used this water body for recreation since 1975? ☐ Yes ☐ No If so, please check ALL that apply:						
☐ Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing		
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	☐ Rafting		
☐ Hunting	☐ Trapping	☐ Fishing	☐ None of the above	☐ Other:		
3. Have you ob	How often do you use it for recreation?  G More than 5 times per year  G 1 - 5 times per year  G Less than 1 time per year - please describe:  3. Have you observed others using this water body for recreation since 1975?   No					
Swimming □	ase check ALL to	SCUBA diving	☐ Tubing	☐ Water skiing		
☐ Wind surfing	☐ Kayaking	☐ Boating	□ Wading	☐ Rafting		
☐ Hunting	☐ Trapping	☐ Fishing	☐ None of the above	Other:		
How often have you observed it being used for recreation?  G More than 5 times per year  G 1 - 5 times per year  G Less than 1 time per year - please describe:  4. Additional Comments:						
Contact Information (if willing to provide): Name: Address:						

Telephone #:

Date: 10 / 09 / 2006

#### Field Data Sheets for Recreational Use Stream Surveys

## Data Sheet B - Site Characterization - 1 of 3 (A senarate Data Sheet B must be completed for each site)

(	A separate Data	sneet B must be comp	neted for each site)		
Latitude (ddd.dddd): 36	9.98764		Arrival Time:	:	
Longitude (ddd.dddd):	93.64611	18	13		
Photo Ids: Upstream:		Oownstream:	Other:		
099	33	0984	0985		
Varrative Description	of Location: (Des	scribe access point to strea	ım, nearby roads, landmarks, e	etc.)	
at Hwy W b	ridge crossi	ng			
urrounding Condition	ns*: (Mark all that p	promote or impede recreat	ional uses. Attach photos of ev	vidence or unusual	
☐ City/county parks	☐ Playgrounds	☐ MDC conservation la	ands   Urban areas	☐ Campgrounds	
☐ Boating accesses	☐ State parks	☐ National forests	☐ Nature trails	☐ Stairs/walkway	
☐ No trespass sign	☑ Fence	☐ Steep slopes	Other: AGRICU	Other: AGATCULTUNG - (0425)	
Iuman Uses Observed	Lsee photy	0 0183			
☐ Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing	
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	☐ Rafting	
☐ Hunting	☐ Trapping	☐ Fishing	None of the abov		
Describe: (include nume	er of individuals rec	reating, frequency of use,	photo-documentation of evide	nce of recreational uses, etc.)	
Evidence of Human Us	se*:				
☐ Roads	☐ Foot paths/prin	nts Dock/platform	n	ng □ RV / ATV Tracks	
☐ Rope swings	☐ Camping Sites	☐ Fire pit/ring	☐ NPDES Discharg	e	
Other: NOTH	NG			7,300	
Sources of Pollution: (e	e.g., trash dumping t	ires, drainages, discharges	. etc.)		
AGNICULTURG- PHO		,	,/		
<u> </u>					

***************************************	000 00 11 15	2110				
	88 Site # 12 09 / 2006	<u>-70</u>				4
Date: <u>10 / _</u>						
	Data	a Sheet B - Site C	Characterizatio	on - 2 of 3		
Stream Morp Upstream	ohology: View Physical Din	iensions:				
	Distance from access point (m)	Width (m)	Length	(m)	Avg. Depth (m)	Max Depth (m)
☐ Riffle						
☐ Run						
Pool	7	0.45	7		0.02	0.05
Flow	Present?	X No	Velocity (ft/s	sec):		
Downstrea	ım View Physical I	Dimensions:				
	Distance from access point (m)	Width (m)	Length	(m)	Avg. Depth (m)	Max Depth (m)
☐ Riffle						
☐ Run						
Pool	18	2.1	18		0.20	0.24
☐ Flow	Present?	□ No	Velocity (ft/s	sec):		
Substrate**	(These values should ad	dun to 1009/ )				
					% Mud/Clay	% Bedrock
<del></del>				% Silt		
Aquatic Vege	etation*: (Note amoun	nt of vegetation or al	gal growth at the a	ssessment sit	e.)	
NX						
Water Chara	cteristics*: (Mark al	l that apply.)				
Odor:	☐ Sewage	☐ Musky	☐ Chemical	□ None	Other: Ay	nalrobic
Color:	□ Clear	☐ Green	□ Gray	X Milky		
Bottom Dep	osit:   Sludge		☑ Fine sediments	s ∏ None	□ Other:	

☐ Foam

Fine sediments

☐ None

□ None

☐ Other:

 $\square$  Other:

☐ Sludge

□ Oil

Surface Deposit:

☐ Solids

Scum

<sup>\*</sup>This information is not to be used solely for removal of a recreational use designation but rather is to provide a more comprehensive understanding of water conditions. Consequently, this information is not intended to directly influence a decision on the recreation use analysis but may point to conditions that need further analysis or that affect another use.

WBID # 588 Site # 1240

Date: 10 / 09 / 2006

NONE

#### Data Sheet B - Site Characterization - 3 of 3

<b>Comments:</b> Please describe any departures from protocol and the reasons for departure (e.g., unanticipated unique local conditions, problems in measuring, site relocation).								
	_							
	_							

WBID # 588 Site # 1240

Date: 10/09/2006

Telephone #:

NONE

## Field Data Sheets for Recreational Use Stream Surveys

#### Data Sheet C - Interviews

(Make additional copies as necessary for multiple interviews)

<ol> <li>Do you live in the area? □ Yes □ No</li> <li>If so, how long have you lived here?</li> </ol>									
2. Have you personally used this water body for recreation since 1975? ☐ Yes ☐ No If so, please check ALL that apply:									
	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing					
☐ Wind surfing	☐ Kayaking	☐ Boating	☐ Wading	☐ Rafting					
☐ Hunting	☐ Trapping	☐ Fishing	☐ None of the above	☐ Other:					
How often do you use it for recreation?  G More than 5 times per year  G 1 - 5 times per year  G Less than 1 time per year - please describe:   3. Have you observed others using this water body for recreation since 1975?   No  If so, please check ALL that apply:									
☐ Swimming	☐ Skin diving	☐ SCUBA diving	☐ Tubing	☐ Water skiing					
☐ Wind surfing	☐ Kayaking	☐ Boating	□ Wading	☐ Rafting					
☐ Hunting	☐ Trapping	☐ Fishing	☐ None of the above	☐ Other:					
How often have you observed it being used for recreation?  G More than 5 times per year  G 1 - 5 times per year  G Less than 1 time per year - please describe:									
4. Additional C	omments:								
Contact Inform Name: Address:	ation (if willing	to provide):							



Site# 1238 Photo ID# 0965, Upstream



Site# 1238 Photo ID# 0967



Site# 1238 Photo ID# 0966, Downstream



Site# 1238 Photo ID# 0968



Site# 1238 Photo ID# 0969



Site# 1239 Photo ID# 0971, Upstream



Site# 1238 Photo ID# 0970



Site# 1239 Photo ID# 0972, Downstream



Site# 1239 Photo ID# 0973



Site# 1239 Photo ID# 0977



Site# 1239 Photo ID# 0974



Site# 1239 Photo ID# 0978



Site# 1239 Photo ID# 0979



Site# 1240 Photo ID# 0984, Downstream



Site# 1240 Photo ID# 0983, Upstream



Site# 1240 Photo ID# 0985